

20-8620



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

650.7910

Job Sheet 213824

Accounting Job SE CAD 139 Valve



Part No: 650.7910

Job Qty: 1 pcs

Part Name: Shroud



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 10/7/20

Job Tracking No:

Due Date: 10/19/20

Created By: Marie Lajeunesse

Type: R+D

Description:

Note: DWG 650.7910 REV PA2 IPP REV A 20.07.03 NEW ISSUE FK VERIFY DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier	Sign-off
					Setup Hrs	Run Hrs		
100	SL-154 - 1	1 pcs	10/12/20	10/12/20	1.00	0.33	SL-154 - 1 / SL-2500	JK 20-10-9
110	QC 2	1 pcs	10/12/20	10/12/20	0.00	0.00	QC 2 - 1	
							QC 2 - 12	
							QC 2 - 14	
							QC 2 - 17	
							QC 2 - 19	
							QC 2 - 2	
							QC 2 - 20	
							QC 2 - 22	
							QC 2 - 23	
							QC 2 - 25	
							QC 2 - 32	
							QC 2 - 33	
							QC 2 - 35	
							QC 2 - 39	
							QC 2 - 4	
							QC 2 - 40	
							QC 2 - 44	
							QC 2 - 45	
							QC 2 - 48	
							QC 2 - 49	
							QC 2 - 50	
							QC 2 - 51	
							QC 2 - 52	
							QC 2 - 57	
							QC 2 - 62	
							QC 2 - 63	
							QC 2 - 8	
							QC 2 - 66	
							QC 2 - 64	
							QC 2 - 65	



Container No: S305840



Part: 650.7910

Job No: 213824

Serial No/Batch: S305840

Revision: REV-PA2

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 10/09/20

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					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
					QC 2 - 76	
					QC 2 - 86	
					QC 2 - 83	
120	QC 8	1 pcs	10/12/20	0.00 0.00	QC 8 - 12	
					QC 8 - 14	
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	B-a 20-10-13
					QC 8 - 9	
					QC 8 - 68	
					QC 8 - 67	
					QC 8 - 1 (A)	
					QC 8 - 47	
					QC 8 - 40	
					QC 8 - 52	
					QC 8 - 23	
					QC 8 - 57	
					QC 8 - 76	
					QC 8 - 61	
					QC 8 - 66	
					QC 8 - 73	
					QC 8 - 82	
130	Outsource - 17 - Passivate	1 pcs	10/19/20		GRO002-VC	5
140	Packaging 2-1 - Recelve - B4B	1 pcs	10/19/20	0.00 0.00	Packaging 2 - 1 - B4B	
					Packaging 2 - 2 - B4B	
					Packaging 2 - 3 - B4B	
					Packaging 2 - 5 - B4B	
					Packaging 2 - 4 - B4B	
					Packaging 2 - 6 - B4B	
					Packaging 2 - 7 - B4B	
					Packaging 2 - 8 - B4B	
					Packaging 2 - 9 - B4B	
					Packaging 2 - 10 - B4B	
					Packaging 2 - 11 - B4B	
					Packaging 2 - 12 - B4B	
					Packaging 2 - 13 - B4B	
					Packaging 2 - 14 - B4B	
					Packaging 2 - 15 - B4B	
					Packaging 2 - 16 - B4B	
					Packaging 2 - 17 - B4B	
					Packaging 2 - 18 - B4B	
					Packaging 2 - 19 - B4B	
					Packaging 2 - 20 - B4B	
					Packaging 2 - 21 - B4B	

Not required

DAS
10
9-89

10/7/2020

[Dart Hawkesbury] Job Sheet - Lajeunesse, Marie

150 QC 6	1 pcs	10/19/20	0.00 0.00	Packaging 2 - 22 - B4B	
				Packaging 2 - 23 - B4B	
				Packaging 2 - 24 - B4B	
				Packaging 2 - 25 - B4B	
				Packaging 2 - 26 - B4B	
				Packaging 2 - 37 - B4B	
				QC 6 - 9	
160 Packaging 3-1 - Stock - B4B	1 pcs	10/19/20	0.00 0.00	QC 6 - 68	
				QC 6 - 61	
				QC 6 - 40	
				QC 6 - 81	
				QC 6 - 82	
				Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
170 QC 21 - SA	1 pcs	10/19/20	0.00 0.00	Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 37 - B4B	
				QC 21 - SA - 21	
				QC 21 - SA - 70	
				QC 21 - SA - 9	

Part Op 100 - ***CRITICAL PART - EXTREME CARE MUST BE TAKEN*** MUST ENSURE THE COMPONENTS ARE
 Descriptions: NEVER DAMAGED**** 1-Machine as per folio FD323 FOLIO REV: AA DWG REV: PA2 2-Debur
 110 - QC2- Inspect parts off machine FAI/FAIB
 120 - QC8- Inspect parts - second check
 130 - Issue P/O; PASSIVATE IAW QQ-P-35C, TYPE II -Material type; 303 stainless steel -Certificate of
 Conformity is required
 140 - Certificate of Conformity is required
 150 - QC6- All purchased or subcontracted products
 160 - Identify as per dwg & Stock
 170 - QC21- Final Inspection - Work Order Release

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M303R0.750	303 Round Bar 0.750	.2470 ft (.247 ea)	100-SL-154 - 1	5302988

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-SL-154 - 1	M303R0.750	0	38	0

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Part Specifications					
Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Shroud	0.225Inches $\pm$ 0.005	0.230 0.220		
2	Shroud	0.060Inches $\pm$ 0.010	0.070 0.050	Radius	
3	Shroud	0.495Inches $\pm$ 0.005 - 0.000	0.500 0.495		
4	Shroud	0.125Inches $\pm$ 0.010	0.135 0.115	Radius	
5	Shroud	0.060Inches $\pm$ 0.010	0.070 0.050	Radius	
6	Shroud	0.120Inches $\pm$ 0.005 - 0.000	0.125 0.120		
7	Shroud	0.225Inches $\pm$ 0.005	0.230 0.220		
8	Shroud	0.300Inches $\pm$ 0.005	0.305 0.295		
9	Shroud	2.51Inches $\pm$ 0.01	2.52 2.50		
10	Shroud	2.695Inches $\pm$ 0.005	2.700 2.690		
11	Shroud	0.067Inches $\pm$ 0.005	0.072 0.062	Diameter	
12	Shroud	0.400Inches $\pm$ 0.010 - 0.030	0.410 0.370		
13	Shroud	2.860Inches $\pm$ 0.005	2.865 2.855		
14	Shroud	0.495Inches $\pm$ 0.002	0.497 0.493		
15	Shroud	0.625Inches $\pm$ 0.010	0.635 0.615		

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Ketan Tailor

From: Jacob Becker
Sent: October-07-20 4:57 PM
To: Ketan Tailor
Cc: Steven Drouin
Subject: RE: Deviations for Valve Pull Force Test Tool

Understood.

Per our conversation these deviations are acceptable.

Regards,

JACOB BECKER
Lead Sustaining Engineer

DART AEROSPACE
T 1 760 509-1639
M 1 760 691-9108

From: Ketan Tailor <ktailor@dartaero.com>
Sent: Wednesday, October 07, 2020 1:48 PM
To: Jacob Becker <jbecker@dartaero.com>
Cc: Steven Drouin <sdrouin@dartaero.com>
Subject: RE: Deviations for Valve Pull Force Test Tool

Hey Jacob,

We measure the CBL-1240 Cable we have in stock and we will not deviate the 645.7810 Cable Rod.

The diameter of the uncoated Cable was 0.063".

Thanks,
Ketan

From: Ketan Tailor
Sent: October-07-20 4:35 PM
To: Jacob Becker <jbecker@dartaero.com>
Subject: Deviations for Valve Pull Force Test Tool

Hey Jacob,

We would like to make changes to the following P/Ns in order to decrease the lead time for the 607.3301 Valve Pull Force Test Tool

607.3301 Valve Pull Force Test Tool

- Replace 601.1581 Cable with CBL-1240
- Replace 601.1054 Crimp Sleeve with CBL-460
- Replace 601.2330 Cotter Pin with MS24665-103

650.7910 Shroud

- Omit outsourcing for Passivation

645.7910 Cable Housing

- Omit outsourcing for Passivation

~~645.7810 Cable Rod~~

- ~~Dimension was 0.072+/-0.005 is 0.063 +0.004/-0.001~~

645.7110 Lock Nut Swivel Type

- Omit outsourcing for Electropolish and Passivation.

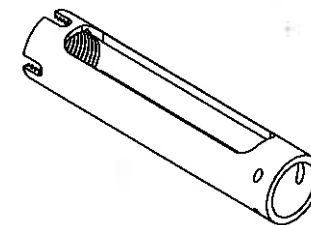
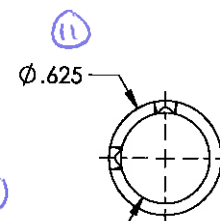
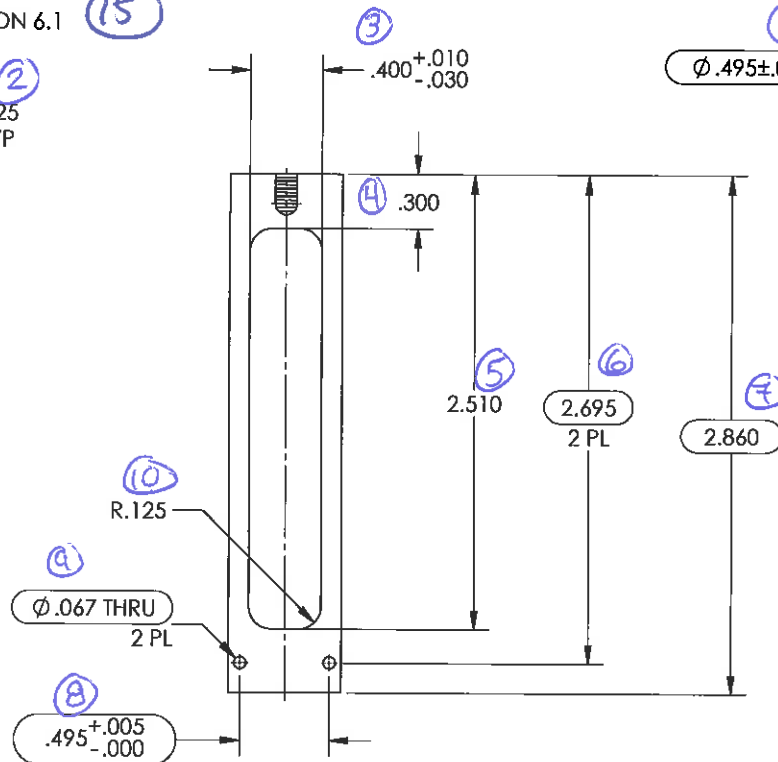
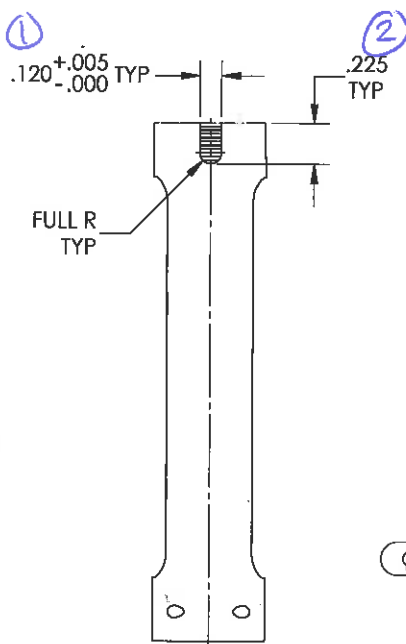
Please confirm if these changes are acceptable.

Thanks,
Ketan

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NOTES:

1. DEBURR AND BREAK ALL SHARP EDGES
2. MATERIAL: 303 SS IAW AMS-5640 OR ASTM A582 (PA2) (4)
3. IDENTIFY IAW MPP-120
4. FINISH: PASSIVATE IAW MPP-172 SECTION 6.1 (15)



650.7910

9/16-24 UNEF - 2B
V.330

PROTOTYPE REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED	CHANGE CODE	EFFECTIVITY	REVISED BY
B1-1	PA1	REVISED NOTE 4. REMOVED ELECTROPOLISH FINISH	06-24-2020	T. CROSS	MDI	NEXT ORDER	K. TAILOR
A4-1	PA2	ADDED ASTM A582 STANDARD TO NOTE 1	09-14-2020	T. CROSS	MDI	NEXT ORDER	K. TAILOR

1		650.7910		SHROUD		DESCRIPTION		MATEL		SPEC.	
QTY		PART #		PART #		PARTS LIST		PARTS LIST		PARTS LIST	
NEXT ASSY (S)		650.5300		ORIGINAL DATE (MM-DD-YY)		06-28-2014		DART AEROSPACE		3030 ENTERPRISE CT., SUITE A, VISTA, CA 92081 (760)-724-5300	
DRAWN BY		N. CAP		CHECKED BY		P. BRAVO		DRAWING APPROVAL		P. BRAVO	
CONTRACT NO.				UNLESS OTHERWISE SPECIFIED		DIMENSIONS ARE IN INCHES		TOLERANCES ARE:		2 PLACE DECIMALS ±.01	
						3 PLACE DECIMALS ±.005		ANGLES ±.5°		SCALE NONE	
SITE		CAGE CODE		DWG. NO.		REV.		SHEET		1 OF 1	
B		07ML6		650.7900		PA2					

DART AEROSPACE LTD

Work Order:	213824
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Description: SHROUD

Part Number:	650.7910
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Inspection Dwg: 650.7900

Rev: PA2

Page 1 of 1

INSPECTION SHEET

	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1	.120	+ .005/-0.0	.124	/		g-PIN	
2	.225	+/- .005	.226	/		H-G	
3	.400	+ .01/- .030	.399	/		VERU JL-2	
4	.300	+/- .005	.298	/		"	
5	2.510	+/- .005	2.507	/		H-G	
6	2.695	+/- .005	2.694	/		VERU JL-2	
7	2.860	+/- .005	2.855	/		"	
8	.495	+ .005/-0.0	.4960	/		g-PIN	
9	Ø.067	+/- .005	-.067	/		VERU JL-2	
10	R.125	+/- .005	-.125	/		g-PIN	
11	.625	+/- .005	-.626	/		VERU JL-2	
12	.495	+/- .002	.4955	/		g-PIN	
13	9/16-24 UNEF-2B			✓		FITS MATING PART 650.7712	
	MINOR Ø: .5223	+/- .0049	-.520	/		VERU JL-2	
M	SS 303		SS 303	✓		MILL TEST ATTACHED	
	ASTM A582		ASTM A582			POM3047147	
15	PASSIVATION				✓	OMITTED PER ATTACHED NCR/DEVIATION	

DAS

9.81

Measured by:	IL
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Date:	20-10-9
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Checked by:

Date: 20-10-13

QC Inspector:

Date: OCT 16 2020

Engineering Approval:
(If necessary)

Date:

Rev

Date _____

Change

New Issue

Revised by

MG

Approved

1

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M303R0.750

PO / BATCH NO.: POHB047147

DATE: SEP 25 2020

S302988

MATERIAL CERT REC'D: YES

THICKNESS ORDERED: 0.750

QUANTITY RECEIVED: 56 FT

THICKNESS RECEIVED: 0.750

QUANTITY INSPECTED: 56 FT

SHEET SIZE ORDERED: ---

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: ---

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	Y N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	Y N	
CORRECT MATERIAL PER M-DRAWING	Y N	ASTM A572
CORRECT THICKNESS	Y N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	Y N	KF 1962237
CORRECT MATERIAL IDENTIFICATION	Y N	
CORRECT M# ON THE MATERIAL	Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: _____	82	SIGNED OFF BY: _____	
DATE: SEP 25 2020	9-89	DATE: _____	

Attach this Inspection sheet with the corresponding material cert and remit to be scanned and received in

39697-5761

V0057231



An ISO 9001 : 2015 Certified Company

Regd. Office & Works: Plot No.: 235, Sarkhej Bavia, N.H. No. 8-A, Village Sari, Taluka Sanand,
Dist.: Ahmedabad-382220, Gujarat, India
T.: 02717-610806 (100 lines), F.: 02717-610824
E: sales@gopalgroup.com | W: www.gopalgroup.com

Inspection Certificate 3.1 According To EN 10204 : 2005

Test Certificate No. : 109277
Date of Issue : 14-October-2015
P. O. No. : MN6575-BN6576 & MN6535-BN6636-MN6648
Invoice : LSL/19-20/4253
CIN NO : U27100GJ1999PLC036413

Product	Grade	Supply Condition	Colour Code	Process Route	Stamp of Engineer	Length (Feet)	Tolerance	Weight Lbs
STAINLESS STEEL BRIGHT ROUND BARS " LAXCON BRAND"	AISI 303	Drawn & Polished	YELLOW	EIF-AOD-LR-Fully Killed		12'-14'	h9	1470

Chemical Composition (Weight %)

	C	Mn	Si	S	P	Cr	Ni	N		No of 3rdl	Size (Inch)	Pcs
Min.	-	-	-	0.150	-	17.00	8.00	-				
Max.	0.15	2.00	1.00	-	0.045	19.00	10.00	-				
Heat No.												
19L1239	0.039	1.79	0.35	0.254	0.039	17.23	8.05	0.0560		1	3/4"	70

Test Method - ASTM A370 / Test Condition - Solution Annealed

Specified Value	Proof Strength N/mm2	Tensile Strength N/mm2/ (Rm)	Elongation after Fracture A %	Reduction of Area %	Hardness HBW	Test Method :- ASTM E-23 Charpy (V) Impact Test (2mm) at (Joules)			
-	0.2% (Rp 0.2)	-	-	-	Min Max	I	II	III	Avg.
SPEC	-	-	-	-	-	-	-	-	-
19L1239/3/4"	346	659	56.02	60.15	180 185	-	-	-	-

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82
9-89

Remarks:

- The material is free from Radioactive and Mercury contaminations.
- Lead has not added during manufacturing.
- Steel is fully killed by Aluminum for fine grain structure.
- Material confirms the requirements as per ASTM A582: 2017.

We hereby certify that above material described herein has been manufactured and tested with satisfactory results in accordance with the Specification & requirements

For Laxcon Steel Ltd.

Authorized Signatory (Q.C.)



Entered: JR Date: OCT 27 2020



NCR No. 20 8620 **WORK ORDER NON-CONFORMANCE / ROUTE UPDATE**

Route update only ☐

Job: <u>213824</u> Part No. <u>650.7910</u>		DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☒ Water Jet ☐ Supplier Quality ☐					
Date : <u>20.10.07</u>		Sequence #: <u>130</u>		QTY Affected : <u>1</u>			MRB (QSI042) <u>51</u> <u>9-84M</u> <u>20/10/07</u>		
Description Work Order Deviation				Disposition				Completed By <u>SL 20-10-9</u> Lead hand / Supervisor <u>A-a 20-10-13</u> QC / QA Coordinator <u>PD 20-10-15</u>	
<u>Omit Outsource for Passivation</u>				<u>this change was made to reduce lead time</u>					
Root Cause		FAULT CATEGORY							
☐ Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☒ Human Factors		☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☒ Finish ☐ Part Lost/Missing ☐ Misread							
		Other/Details:							